

REMARKS

Claims 1-14 are presented for consideration, with Claims 1 and 12 being independent.

The specification and abstract have been reviewed and amended to correct minor informalities and improve their idiomatic English form. In amending the specification, the title has been changed to be more clearly indicative of the claimed invention. In addition, Claims 1 and 12 have been amended to further distinguish Applicant's invention from the cited art. Also, editorial changes have been made to selected claims.

Claims 1, 2 and 12-14 stand rejected under 35 U.S.C. §103 as allegedly being obvious over Watanabe (JP '528) in view of Kuriyama '224. In addition, Claims 3-6 stand rejected as allegedly being obvious over those citations and further in view of Hayashi '862, and Claims 7-11 are rejected as allegedly being obvious over Watanabe, Kuriyama, Hayashi and Yoshii '820. These rejections are respectfully traversed.

Applicant's invention as set forth in Claim 1 relates to a display device comprised of a light source for emitting a light, a light modulation element for modulating the emitted light, and picture signal inputting means for receiving a picture signal from the outside and inputting a drive signal for driving the light modulation element to the light modulation element, in which the light modulation element modulates light based on the picture signal and an image is displayed. The picture signal inputting means includes target light amount calculating means for calculating an adequate light amount for an image display and light amount controlling means for receiving the signal from the target light amount calculating means and controlling the light so as to obtain a target light amount. As amended, Claim 1 sets forth that the picture signal inputting means changes signal amplification rates in at least two input ranges

for changing input-output conversion characteristics according to an output of the target light amount calculating means, and in the two input ranges of the input-output characteristics the picture signal inputting means largely amplifies the driving signal when the picture signal has a low luminance and slightly amplifies the driving signal when the picture signal has a high luminance.

Claim 12 also relates to a display device and includes a light source, a light modulation element and picture signal inputting means as in Claim 1. In Claim 12, the picture signal inputting means comprises target light amount calculating means for calculating an adequate light amount for an image display and light amount controlling means for receiving the signal from the target light amount calculating means and controlling a light which is transmitted or reflected by the light modulation element so as to obtain a target light amount. As claimed, the picture signal inputting means changes a signal amplification factor for changing input-output conversion characteristics corresponding to an output of the target light amount calculating means.

Support for the amendments to Claims 1 and 12 can be found in the specification, for example, on page 8, line 13 to page 10, line 22, on page 20, line 1 to page 24, line 16 and on page 29, line 12 to page 31, line 5, as well as in Figures 3 and 6 of the drawings.

In accordance with Applicant's claimed invention, the display device is capable of displaying and maintaining a high quality display image.

The primary citation to Watanabe relates to a display device and is said to include a light source, a light modulation element and picture signal inputting means. As asserted in the Office Action, the picture signal inputting means includes target light amount

calculating means and light amount controlling means which controls the light so as to obtain a target light amount.

The secondary citation to Kuriyama relates to a display device and is alleged to teach use of an amplifier to control high or low luminance of a driving signal.

In contrast to Claim 1 of Applicant's invention, however, it is respectfully submitted that the combination of art, even if proper, still fails to teach or suggest, among other features, changing signal amplification rates in at least two input ranges for changing input-output conversion characteristics according to an output of the target light amount calculating means. Moreover, the proposed combination of art also fails to teach or suggest, inter alia, changing a signal amplification factor for changing input-output conversion characteristics corresponding to an output of the target light amount calculating means as set forth in Claim 12.

Watanabe is understood to merely control a power source for a light source to correct picture signals according to light source control signals. In Watanabe's display device, for example, when a lamp is bright a liquid crystal panel will be corrected to be dark, and when the lamp is dark the display device makes a correction such that the liquid crystal panel is bright. These deficiencies are not compensated for by Kuriyama.

Accordingly, reconsideration and withdrawal of the rejection of Claims 1, 2 and 12-14 under 35 U.S.C. §103 is respectfully requested.

The tertiary citation to Hayashi relates to a display device and was cited for its teaching of a rotatable light amount adjusting member. Yoshii relates to a surface position detecting system and was cited for its teaching of an ultrasonic motor. These tertiary citations fail, however, to compensate for the deficiencies in Watanabe and Kuriyama as discussed above with respect to Applicant's independent claims. Therefore, reconsideration and withdrawal of the

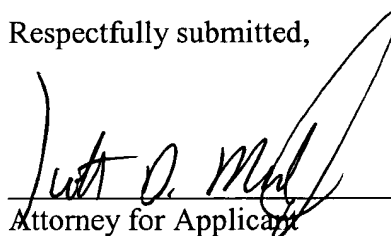
rejections of Claims 3-11 under 35 U.S.C. §103 are also submitted to be in order and such action is respectfully requested.

Accordingly, it is submitted that Applicant's invention as set forth in independent Claims 1 and 12 is patentable over the cited art. In addition, dependent Claims 2-11, 13 and 14 set forth additional features of Applicant's invention. Independent consideration of the dependent claims is respectfully requested.

In view of the foregoing, reconsideration and allowance of this application is deemed to be in order and such action is respectfully requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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